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EXAMINER

SOTOMAYOR, JOHN

ART UNIT

PAPER NUMBER

3714

DATE MAILED: 08/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,457

Applicant(s)

TOWNSHEND, BRENT

Examiner

John L Sotomayor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 5, 42-44 and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams, Jr. et al (US 6,017,219).

3. Regarding claim 1, Adams, Jr. et al discloses a system and method of reading instruction that includes a means for detecting speech of a user who is reading out loud (Col 2, lines 36-41 and Fig. 1), a means for evaluating the user's reading skill (Col 4, lines 3-7) and a means for making reading recommendations (Col 4, lines 43-47).

4. Regarding claim 2, Adams, Jr. et al discloses a system and method of reading instruction with a means for adjusting a level profile of a book being read (Col 4, lines 2-12).

5. Regarding claims 4 and 49, Adams, Jr. et al discloses a system and method of reading instruction with a means for providing feedback on the user (Col 4, lines 42-47).

6. Regarding claim 5, Adams, Jr. et al discloses a system and method of reading instruction that provides feedback to the user in the form of a progress report (Col 9, lines 60-65).

7. Regarding claim 42, Adams, Jr. et al discloses a system and method of reading instruction with a client including a display and a speech detector (Col 2, lines 51-56 and Fig. 1) and a server device, shown as a system controller, operable to detect speech from a user reading

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from a book, evaluates the speech, and provides reading recommendations to the user (Col 4, lines 3-12 and 43-47 and Fig. 1).

8. Regarding claim 43, Adams, Jr. et al discloses a system and method of reading instruction in which the display is a device selected from the group consisting of a wireless handheld device, a personal digital assistant, a monitor, a personal computer, a digital data reader, an electronic book and a document. In the instant case, the reference discloses a personal computer and a document as display means of choice (Col 3, lines 40-56).

9. Regarding claim 44, Adams, Jr. et al discloses a system and method of reading instruction in which the speech detector is a device selected from the group consisting of a telephone, a mobile telephone, a microphone and a voice transducer. In the instant case, the reference discloses a microphone as the speech detector (Col 3, line 53).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 8-15,17,19,21-29,34-36,38-39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, Jr. et al in view of Waters (5,540,589).

13. Regarding claim 8, Adams, Jr. et al discloses a language instruction system and method with a speech recognition device operable to provide an estimate of speech (Col 2, lines 37-48) and provide a reading recommendation (Col 4, lines 42-47). Adams, Jr. et al does not specifically disclose converting the estimate of speech into an item score or using said score to provide a reading recommendation. However, Waters teaches a system for converting an estimate of speech into an item score (Col 3, lines 2-4). In addition, it is common and well-known to utilize a provided score for producing feedback and results recommendations in an instruction system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide an automatic reading system with a speech recognition device operable to provide an estimate of speech, convert the estimate of speech into a score and provide a reading recommendation based upon that score for the purposes of assisting a user in quantifying reading progress and ability.

14. Regarding claim 9, Adams, Jr. et al discloses a system in which the speech recognition system estimates the linguistic content of input speech (Col 4, lines 2-11).

15. Regarding claims 10 and 11, Adams, Jr. et al discloses a system in which the estimate of speech is placed in data files on a computer system (Col 2, lines 52-56). It is inherent, when storing data into a computer that this data be converted to a machine recognizable format (claim 10). In addition, it is notoriously common and well-known to place data into data files on a computer system in the ASCII data format (claim 11). Therefore, it would have been obvious to

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one of ordinary skill in the art at the time of invention to convert estimate of speech data from an analog input format to a machine recognizable format, and that this format is ASCII for storage in a computer system for the purposes of placing the data in a state upon which it may be operated and metrics derived therefrom.

16. Regarding claim 12, Adams, Jr. et al discloses a system with a plurality of databases which include a response database (Col 4, lines 17-32).

17. Regarding claim 13, Adams, Jr. et al discloses a system with a plurality of databases including a correct response database (Col 4, lines 17-25).

18. Regarding claims 14 and 15, Adams, Jr. et al discloses a system with a plurality of databases including a sample database representing a correct reading of the text (claim 14) and a database in which the correct response is represented in the text (claim 15) (Col 4, lines 17-32).

19. Regarding claims 17 and 41, for purposes of examination the "speech" referred to in the claim is assumed to be the speech recorded by the reader in the instant case. Adams, Jr. et al discloses the population of a database containing responses that are different from the correct responses in a given speech from a reader (Col 4, lines 20-25). Adams, Jr. et al does not specifically disclose that this database comprises a score. However, Waters teaches a system for converting an estimate of speech into an item score (Col 3, lines 2-4). With the data available in a database and the teaching of a score being a desirable measure of reader progress, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a system in which a calculated score represents the number of differences between a recorded speech and the database of correct responses. This score would be calculated for the purposes of providing robust feedback to the reader.

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20. Regarding claims 19, 21 and 22, Adams, Jr. et al discloses a recommendation device that provides feedback to a user (claim 19)(Col 4, lines 43-47), has access to a plurality of databases (claim 21)(Col 4, lines 17-28), and wherein the databases include a book database (claim 22)(Col 4, lines 7-10).

21. Regarding claims 23-27, Adams, Jr. et al discloses a reading instruction system and method that contains a plurality of book databases that contain several versions of a book (claim 23) (Col 4, lines 12-28), versions of a book with different level profiles (claim 24) (Col 4, lines 3-11), a version of the book containing a memory pointer capable of tracking in several versions of a book where a user is reading (claim 25) (Col 4, lines 12-37), versions of the book containing linkage points (claim 26) (Col 4, lines 29-42) and wherein the recommendation device uses the linkage points to switch between the several versions of the book (claim 27) (Col 4, lines 3-11). In this instance, Adams, Jr. et al sets forth a reading system with multiple versions of a book that encompass the text, visual and audio versions, each of which is linked to the others and tracked to maintain a level profile for a reader to allow a reader and a computer to switch between the several versions, and the amount and level of information each will read as shown in Column 4, lines 3-42.

22. Regarding claims 28 and 29, Adams, Jr. et al discloses a plurality of databases that include a user database (claim 28) that includes user information such as user identification, history of books read and evaluations, user preferences, and responses to questions (Col 4, lines 2-52).

23. Regarding claim 34, Adams, Jr. et al discloses a language instruction system and method with a speech recognition device operable to provide an estimate of recorded speech (Col 2, lines

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37-48), and estimate of linguistic content of a recorded speech (Col 2, lines 49-56) and provide a reading recommendation (Col 4, lines 42-47). Adams, Jr. et al does not specifically disclose converting the estimate of speech into an item score or using said score to provide a reading recommendation. However, Waters teaches a system for converting an estimate of speech into an item score (Col 3, lines 2-4). In addition, it is common and well-known to utilize a provided score for producing feedback and results recommendations in an instruction system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide an automatic reading system with a speech recognition device operable to provide an estimate of recorded speech, an estimate of the linguistic content of a recorded speech, convert the estimate of speech into a score and provide a reading recommendation based upon that score for the purposes of assisting a user in quantifying reading ability and performance improvement.

24. Regarding claim 35, Adams, Jr. et al discloses a reading instruction system in which the level profile for a reader is adjusted (Col 4, lines 3-11). Adams, Jr. et al does not specifically disclose that the reading instruction system contains an electronic book. However, Huffman et al teaches a reading instruction system that uses an electronic book (Col 2, lines 61-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to keep pace with the innovation in reading instruction systems by using an electronic book for the purposes of applying a level profile method to the most current technological reading matter.

25. Regarding claim 36, Adams, Jr. et al discloses a recommendation device that provides feedback to a user (Col 4, lines 43-47).

26. Regarding claims 38 and 39, Adams, Jr. et al does not specifically disclose that the speech detector in the system converts speech into electrical signals. However, Waters teaches

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that speech may be converted to electronic signals prior to storing the information contained in such signals into a computer file (claim 38) (Col 4, lines 9-11) where the data may then be used to estimate the linguistic content of the recorded speech (claim 39) (Col 4, lines 12-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a system in which a speech detector converts speech into electrical signals for the purposes of storing the information contained in such signals into a computer database for later use.

27. Claims 3 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, Jr. et al in view of Huffman et al (US 5,697,793).

28. Regarding claim 3, Adams, Jr. et al does not specifically disclose that the reading instruction system uses an electronic book. However, Huffman et al teaches a reading instruction system that uses an electronic book (Col 2, lines 61-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to keep pace with the innovation in reading instruction systems by using an electronic book for the purposes of greater flexibility and ease of use for the student.

29. Regarding claim 48, Adams, Jr. et al discloses a server device for adjusting the level profile for a user of a reading instruction system (Col 4, lines 3-7). Adams, Jr. et al does not specifically disclose that the reading instruction system includes an electronic book. However, Huffman et al teaches a reading instruction system that uses an electronic book (Col 2, lines 61-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a reading instruction system in which a server device is used to adjust the level profile of an electronic book. Combining the system disclosed by Adams, Jr. et al with the

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teaching of Huffman et al produces a reading instruction system that may potentially reach a much larger number of users.

30. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, Jr. et al in view of Waters in further view of Huffman et al.

31. Regarding claim 18, Adams, Jr. et al discloses the population of a database containing responses that are different from the correct responses in a given speech from a reader (Col 4, lines 20-25). Adams, Jr. et al does not specifically disclose that this database comprises a score. However, Waters teaches a system for converting an estimate of speech into an item score (Col 3, lines 2-4). Adams, Jr. et al does not disclose, nor does Waters teach a system that includes an electronic book. However, Huffman et al teaches a reading instruction system that uses an electronic book (Col 2, lines 61-65). With the data available in a database and the teaching of a score being a desirable measure of reader progress, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a system in which a calculated item score represents the number of differences between a recorded speech and the database of correct responses when reading an electronic book. This score would be calculated for the purposes of providing robust feedback to the reader while engaged in reading text implemented in an electronic format.

32. Claims 6-7, 30, 32-33, 45-47 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, Jr. et al in view of Wasowicz et al (US 6,299,452).

33. Regarding claim 6, Adams, Jr. et al does not specifically disclose a reading instruction system in which feedback is a comparison with peers. However, Wasowicz et al teaches that reading metric data may be accumulated and then compared with all students taking the same

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test and then compare score results against all peers taking the test, then providing feedback to interested parties (Col 7, lines 34-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a reading instruction system in which feedback is a comparison with peers for the purposes of discovering how well a student is progressing in comparison to peers.

34. Regarding claims 7, 33 and 50, Adams, Jr. et al does not specifically disclose a reading instruction system with means for providing marketing data. However, Wasowicz et al teaches that information concerning the scores of a reading student may be used by a recommender to suggest additional training tools, thus marketing a new tool set to a student who may be in need of the products offered. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a reading instruction system with a means for providing marketing data for the purposes of exposing students and other interested parties to tools and products that would be useful to the student.

35. Regarding claim 30, Adams, Jr. et al discloses a reading instruction system with a speech recognition module to provide an estimate of linguistic content in machine recognizable format (Col 4, lines 3-11), and a recommendation device that accesses a book database containing several versions of a book (Col 4, lines 3-42). Adams, Jr. et al does not specifically disclose the formulation of an item score calculated using Item Response Theory. According to Applicant's specification, Item Response Theory is a statistical method for evaluating a speech estimate that is readily available through reference books available on the market since 1979. Wasowicz et al teaches that various statistical analysis methods may be used to determine a plurality of statistics concerning a student's score in reading proficiency and production, including those outlined in

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the reference documents concerning Item Response Theory (Col 7, lines 25-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a reading instruction system with a speech recognition module to provide an estimate of linguistic content in machine recognizable format, an evaluation device for calculating an item score using statistical methods such as Item Response Theory, and a recommendation device that accesses a book database containing several versions of a book for the purposes of allowing a student's progress to be tracked based upon the changing scores of a student over time.

36. Regarding claim 32, Adams, Jr. et al discloses a reading instruction system in which the recommendation device is operable to provide feedback to a user (Col 4, lines 42-47).

37. Regarding claims 45-47, Adams, Jr. et al does not specifically disclose a reading instruction system that communicates using a network (claim 45), that the network is a telephone network (claim 46), or that the network is a packet-switched network (claim 47). However, Wasowicz et al teaches a reading instruction system that may be implemented over a plurality of networks, including a wide area network, a packet-switched network, or any other computer capable network such as a modem network attached through telephone connectivity (Col 5, lines 51-64). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to produce a reading instruction system capable of communicating with a server device using a network for the purposes of reaching a broad base of readers, including those remote from any significant population center.

38. Claims 16, 20 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, Jr. et al in view of Waters in further view of Wasowicz et al.

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39. Regarding claim 16, Adams, Jr. et al does not disclose, nor does Waters teach a reading instruction system in which an item score is calculated using Item Response Theory. According to Applicant's specification, Item Response Theory is a statistical method for evaluating a speech estimate that is readily available through reference books available on the market since 1979.

Wasowicz et al teaches that various statistical analysis methods may be used to determine a plurality of statistics concerning a student's score in reading proficiency and production, including those outlined in the reference documents concerning Item Response Theory (Col 7, lines 25-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to produce a reading instruction system wherein a score is calculated using Item Response Theory for the purposes of assessing a student's reading production during training.

40. Regarding claim 20, Adams, Jr. et al does not specifically disclose nor does Waters teach a reading instruction system with means for providing marketing data. However, Wasowicz et al teaches that information concerning the scores of a reading student may be used by a recommender to suggest additional training tools, thus marketing a new tool set to a student who may be in need of the products offered. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a reading instruction system with a means for providing marketing data for the purposes of exposing students and other interested parties to tools and products that would be useful to the student.

41. Regarding claim 37, Adams, Jr. et al does not specifically disclose nor does Waters teach a reading instruction system with means for providing marketing data. However, Wasowicz et al teaches that information concerning the scores of a reading student may be used by a recommender to suggest additional training tools, thus marketing a new tool set to a student who

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may be in need of the products offered. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a reading instruction system with a means for providing marketing data for the purposes of exposing students and other interested parties to tools and products that would be useful to the student.

42. Regarding claim 40, Adams, Jr. et al does not specifically disclose nor does Waters teach the formulation of an item score calculated using Item Response Theory. According to Applicant's specification, Item Response Theory is a statistical method for evaluating a speech estimate that is readily available through reference books available on the market since 1979. Wasowicz et al teaches that various statistical analysis methods may be used to determine a plurality of statistics concerning a student's score in reading proficiency and production, including those outlined in the reference documents concerning Item Response Theory (Col 7, lines 25-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to provide a reading instruction system with an evaluation device for calculating an item score using statistical methods such as Item Response Theory for the purposes of increasing the accuracy of a reading recommendation for the user.

43. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams, Jr. et al in view of Wasowicz et al in further view of Huffman.

44. Regarding claim 31, Adams, Jr. et al discloses a server device for adjusting the level profile for a user of a reading instruction system (Col 4, lines 3-7). Adams, Jr. et al does not specifically disclose nor does Wasowicz et al teach that the reading instruction system includes an electronic book. However, Huffman et al teaches a reading instruction system that uses an electronic book (Col 2, lines 61-65). Therefore, it would have been obvious to one of ordinary

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skill in the art at the time of invention to provide a reading instruction system in which a server device is used to adjust the level profile of an electronic book. Combining the system disclosed by Adams, Jr. et al with the teaching of Huffman et al produces a reading instruction system that may potentially reach a much larger number of users.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Padgett (US 6,421,524) for a discussion of an electronic book with personalized metrics.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L Sotomayor whose telephone number is 703-305-4558. The examiner can normally be reached on 6:30-4:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-8361 for regular communications and 703-746-8361 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4558.

jls
July 31, 2003


JOHN EDMUND ROWAK
PRIMARY EXAMINER